PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
United States Patent and Trademark Office
Box PCT
Washington, D.C.20231
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 17 July 2000 (17.07.00)	
International application No. PCT/US99/26886	**Applicant's or agent's file reference** 7349/JB
International filing date (day/month/year) 12 November 1999 (12.11.99)	**Priority date** (day/month/year) 19 November 1998 (19.11.98)
Applicant ROSELLE, Brian, Joseph et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

18 May 2000 (18.05.00)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer Maria Kirchner
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

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WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 :
A23B 7/154, 4/20, A23L 3/3463, C11D 3/00, 1/83, A23P 1/00

A1

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60/109,058 19 November 1998 (19.11.98) US

(71) Applicant *(for all designated States except US)*: THE PROCTER & GAMBLE COMPANY [US/US]; One Procter & Gamble Plaza, Cincinnati, OH 45202 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: ROSELLE, Brian, Joseph [US/US]; 1490 Bruton Parish Way, Fairfield, OH 45014 (US). WARD, Thomas, Edward [US/US]; 3623 Red Oak Road, Oregonia, OH 45054 (US). ROLLINS, David, Kent [US/US]; 2100 Broadhurst, Cincinnati, OH 45240 (US).

(74) Agents: REED, T., David et al.; The Procter & Gamble Company, 5299 Spring Grove Avenue, Cincinnati, OH 45217–1087 (US).

(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: MICROORGANISM REDUCTION METHODS AND COMPOSITIONS FOR FOOD

(57) Abstract

Basic cleaning compositions using toxicologically–acceptable ingredients for treating food such as produce, e.g., fruits and vegetables, and edible animal proteins are provided. Liquid formulations comprising anionic and/or nonionic detergent surfactant, such as potassium alkyl sulfate, that does not affect palatability, electrolyte to provide at least about 0.04 molarity of cations and basic buffer to provide a pH of at least 8.5 are applied to food products immediately before consumption and can significantly reduce microorganism contamination in less than about one minute. The food can be consumed without rinsing.

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PATENT COOPERATION TREATY

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INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION** see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
7349/JB		
International application No.	International filing date *(day/month/year)*	(Earliest) Priority Date *(day/month/year)*
PCT/US 99/ 26886	12/11/1999	19/11/1998
Applicant		
THE PROCTER & GAMBLE COMPANY et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

   a. With regard to the **language,** the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

   [ ] the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

   b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

   [ ] contained in the international application in written form.

   [ ] filed together with the international application in computer readable form.

   [ ] furnished subsequently to this Authority in written form.

   [ ] furnished subsequently to this Authority in computer readble form.

   [ ] the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   [ ] the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. [ ] **Certain claims were found unsearchable** (See Box I).

3. [ ] **Unity of invention is lacking** (see Box II).

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Authority to read as follows:

5. With regard to the **abstract,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. ---

   [ ] as suggested by the applicant.

   [ ] because the applicant failed to suggest a figure.

   [ ] because this figure better characterizes the invention.

   [ ] None of the figures.

INTERNATIONAL SEARCH REPORT

Interi ...nal Application No
PCT/US 99/26886

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A23B7/154 A23B4/20 A23L3/3463 C11D3/00 C11D1/83
A23P1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A23B A23L C11D A23P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98 18352 A (BAUER JOHN DAVID ;BETTSCHART ANDREA GLORIA (US); BULLOCK STEVEN ST) 7 May 1998 (1998-05-07) page 1, paragraph 3 -page 2, paragraph 2 page 3, line 10 -page 7, line 7 page 9, line 5 -page 14, line 7; claims ---	1-6,8-12
P,X	WO 99 00025 A (GEIS PHILIP ANTHONY ;TRINH TOAN (US); CHUNG ALEX HAEJOON (US); PRO) 7 January 1999 (1999-01-07) abstract page 4, paragraph 5 -page 9, line 4 page 32, paragraph 5 -page 33, line 16; claims; examples --- -/--	1-12

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 April 2000	04/05/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Boddaert, P

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Inter onal Application No
PCT/US 99/26886

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 549 758 A (MURCH BRUCE P ET AL) 27 August 1996 (1996-08-27) column 2, line 40 -column 6, line 67 column 9; claims	1-12
X	WO 97 01288 A (PROCTER & GAMBLE) 16 January 1997 (1997-01-16) the whole document	1-12
X	WO 97 01623 A (PROCTER & GAMBLE) 16 January 1997 (1997-01-16) the whole document	1-12
X	WO 97 15202 A (PROCTER & GAMBLE) 1 May 1997 (1997-05-01) page 3, line 11 -page 9, line 6; claims	1
A	WO 95 12326 A (PROCTER & GAMBLE) 11 May 1995 (1995-05-11)	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/US 99/26886

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
WO 9818352 A	07-05-1998	AU	5158398 A	22-05-1998
		BR	9712710 A	26-10-1999
		CZ	9901468 A	15-09-1999
		EP	0936879 A	25-08-1999
		NO	991998 A	03-06-1999
WO 9900025 A	07-01-1999	AU	8169798 A	19-01-1999
		AU	8169898 A	19-01-1999
		EP	0991327 A	12-04-2000
		EP	0991328 A	12-04-2000
		WO	9900026 A	07-01-1999
US 5549758 A	27-08-1996	AT	175318 T	15-01-1999
		AU	1043695 A	23-05-1995
		BR	9407963 A	03-12-1996
		DE	69415827 D	18-02-1999
		DE	69415827 T	05-08-1999
		EP	0726717 A	21-08-1996
		ES	2128032 T	01-05-1999
		JP	9505996 T	17-06-1997
		WO	9512326 A	11-05-1995
		US	5705461 A	06-01-1998
		US	5965499 A	12-10-1999
		CN	1139373 A	01-01-1997
		US	5498295 A	12-03-1996
		US	5500143 A	19-03-1996
		ZA	9408585 A	26-06-1995
WO 9701288 A	16-01-1997	AU	5978196 A	30-01-1997
		AU	6342796 A	30-01-1997
		BR	9608674 A	06-07-1999
		BR	9609348 A	11-05-1999
		CA	2225678 A	16-01-1997
		CA	2225726 A	16-01-1997
		CN	1193895 A	23-09-1998
		CN	1193896 A	23-09-1998
		EP	0835063 A	15-04-1998
		EP	0835065 A	15-04-1998
		JP	11508619 T	27-07-1999
		JP	11510374 T	14-09-1999
		WO	9701290 A	16-01-1997
		US	5849678 A	15-12-1998
WO 9701623 A	16-01-1997	AU	6112496 A	30-01-1997
		BR	9608646 A	18-05-1999
		CA	2225535 A	16-01-1997
		CN	1193341 A	16-09-1998
		EP	0836638 A	22-04-1998
		JP	11508620 T	27-07-1999
		US	5914302 A	22-06-1999
		US	5749924 A	12-05-1998
WO 9715202 A	01-05-1997	US	5932527 A	03-08-1999
		BR	9611146 A	30-03-1999
		EP	0857024 A	12-08-1998
		JP	10512324 T	24-11-1998
		US	5972857 A	26-10-1999

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte. ional Application No
PCT/US 99/26886

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9512326 A	11-05-1995	US 5549758 A	27-08-1996
		US 5500143 A	19-03-1996
		US 5500048 A	19-03-1996
		US 5498295 A	12-03-1996
		US 5503764 A	02-04-1996
		AT 175318 T	15-01-1999
		AU 1043695 A	23-05-1995
		BR 9407963 A	03-12-1996
		CN 1139373 A	01-01-1997
		DE 69415827 D	18-02-1999
		DE 69415827 T	05-08-1999
		EP 0726717 A	21-08-1996
		ES 2128032 T	01-05-1999
		JP 9505996 T	17-06-1997
		US 5705461 A	06-01-1998
		US 5965499 A	12-10-1999
		ZA 9408585 A	26-06-1995

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REC'D 04 JAN 2001
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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
7349/JB		
International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US99/26886	12/11/1999	19/11/1998
International Patent Classification (IPC) or national classification and IPC A23B7/154		
Applicant THE PROCTER & GAMBLE COMPANY et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 11 sheets, including this cover sheet.

   ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the report
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations suporting such statement
   - VI ☒ Certain documents cited
   - VII ☒ Certain defects in the international application
   - VIII ☒ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
18/05/2000	28.12.2000
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Heirbaut, M Telephone No. +49 89 2399 8642

Form PCT/IPEA/409 (cover sheet) (January 1994)

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/US99/26886

I. Basis of the report

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*:
Description, pages:

1-25 as originally filed

Claims, No.:

1-12 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	
	No:	Claims	1-12
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-12
Industrial applicability (IA)	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations
see separate sheet

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

V

1 Reference is made to the following documents (D):

D1: WO-A-9 818 352
D2: US-A-5 549 758
D3: WO-A-9 701 288
D4: WO-A-9 701 623
D5: WO-A-9 715 202
D6: WO-A-9 512 326

The following document was not cited in the international search report. A copy of the document is appended hereto.

D7: Wenninger, J.A. (1997). International cosmetic ingredient dictionary and handbook. Cosmetic, Toiletry and Fragrance Association, Washington, USA, p. 732 and 886

2 The subject-matter of present independent claim 1 (method) does not meet the requirements of novelty (Article 33(2) PCT) in the light of any of the prior art documents D1-D6, read in combination with D7 (representing common technical knowledge), which teach the combination of features indicated in said claim.

Document D1 teaches a toxicologically-acceptable cleaning composition comprising from about 0.01% to about 15% of C_8-C_{18} fatty acid, optionally from about 0.1% to about 4% by weight of nonionic surfactant, optionally toxicologically-acceptable buffer and an aqueous carrier, which has a pH of from about 9.5 to about 12.5, in which preferably potassium carbonate is used as a buffer to provide a pH of about 11, and is capable of being dispensed with a clearly visible content of foam from a container (see in particular page 4, paragraph 3 to page 5, paragraph 1 of D1). The composition provides effective **disinfectancy and sanitisation of food products** (see in particular page 13, paragraphs 4-5 of D1). The compositions preferably have a viscosity that is more than about 10 centipoise, preferably more than about 50 centipoise when at rest, but thin under shear to permit easy dispensing (see in particular page 6, last

paragraph to page 7, first paragraph of D1). A composition comprising 2.64 wt% of oleic acid (ie toxicologically-acceptable detergent surfactant), 2.32 wt% potassium hydroxide and 2.00 wt% sodium bicarbonate (ie electrolytes providing cations), citric acid (ie a toxicologically-acceptable basic buffer) and 89.99 wt% of water, which composition is prepared at a pH of 9.5-12.5, and is used to clean food surfaces, including apples (see in particular example 1, pages 14-15 of D1).

Document D2 teaches a composition for **treating fruits and vegetables** at a basic pH, comprising from about 0.1% to about 15% wt of preferably sodium or potassium oleate (ie a toxicologically-acceptable detergent surfactant), from about 0.2% to about 4% wt of polycarboxylic acid salt, especially potassium hydrogen citrate (ie electrolyte providing cations), an aqueous carrier and preferably from about 0.5% to about 1.5% wt of potassium and/or sodium carbonate buffer (being also an electrolyte providing cations) and a pH of about 11.5 (see in particular claim 5; column 5, lines 39-60 of D2). The composition preferably has a viscosity that is more than 10 centipoise when at rest, but thins under shear to permit easy dispensing, especially from spray containers (see in particular column 6, lines 57-60 of D2). A composition comprising 3.0 wt% of sodium oleate (ie a toxicologically-acceptable detergent surfactant), 1.5 wt% potassium citrate and carbonate (ie electrolytes providing cations), 1.0 wt% Plurafac RA-20 (ie toxicologically-acceptable detergent surfactant) and balance water is described (see in particular column 12, example II of D2).

Document D3 teaches a composition for use in a method for **cleaning fruits and vegetables** at a basic pH above about 9.5, comprising from about 0.01% to about 15% of C_8-C_{18} fatty acid which is neutralized, preferably a member selected from the group consisting of sodium or potassium oleate; preferably from about 0.2% to about 4% by weight of potassium and/or sodium polycarboxylate, having detergent building capability and preferably being derived from natural sources, such as potassium and/or sodium citrate; the balance preferably comprising aqueous carrier selected from water; and preferably employs carbonate salt, or salts, as buffer, preferably with hydroxide base, to provide a pH of from about 11 to about 12.5 (see in particular page 4, line 12 to page 5, line 10 of D3). Furthermore a composition for cleaning fruits and vegetables at a basic pH, comprising from about 0.1% to about 15% by weight of preferably sodium or

potassium oleate (ie toxicologically-acceptable detergent surfactant), from about 0.2% to about 4% by weight of polycarboxylic acid salt, especially potassium hydrogen citrate (ie electrolyte providing cations); from about 0.3% to about 5% of orthophosphoric acid; and the balance comprising aqueous carrier selected from water and water ethanol; which composition preferably contains from about 0.5% to about 1.5% by weight of potassium, and/or sodium, carbonate and/or bicarbonate buffer (being also electrolytes providing cations) and have a pH of from about 11.5 to about 12.5 (see in particular page 6, line 25 to page 7, line 3 of D3). The compositions preferably have a viscosity that is more than about 2 centipoise, preferably more than about 10 centipoise when at rest, but thin under shear to permit easy dispensing, especially from spray containers (see in particular page 8, lines 17-19 of D3). The levels and identities of the ingredients are adjusted to provide products having the desired viscosities of more than about 2 centipoise when at rest, and preferably less than about 100, more preferably less than about 50 centipoise under shear of > 1000 sec^{-1} (see in particular page 12, lines 1-6 of D3). The compositions can provide effective disinfectancy and sanitisation (see in particular page 14, lines 3-4 of D3). Compositions comprising water, KOH, oleic acid, sodium bicarbonate and citric acid with a pH greater than 8.5 are described (see in particular examples 1-3, pages 15-17 of D3).

Document D4 teaches a composition for use in a method for **cleaning fruits and vegetables** at a basic pH above about 9.5, comprising from about 0.01% to about 15% of C_8-C_{18} fatty acid which is neutralized, preferably a member selected from the group consisting of sodium or potassium oleate; preferably from about 0.2% to about 4% by weight of potassium and/or sodium polycarboxylate, having detergent building capability and preferably being derived from natural sources, such as potassium and/or sodium citrate; the balance preferably comprising aqueous carrier selected from water; and preferably employs carbonate salt, or salts, as buffer, preferably with hydroxide base, to provide a pH of from about 11 to about 12.5 (see in particular page 4, line 6 to page 5, line 4 of D4). Furthermore a composition for cleaning fruits and vegetables at a basic pH, comprising from about 0.1% to about 15% by weight of preferably sodium or potassium oleate (ie toxicologically-acceptable detergent surfactant), from about 0.2% to about 4% by weight of polycarboxylic acid salt, especially potassium hydrogen citrate (ie electrolyte providing cations); from about 0.3% to about 5% of

orthophosphoric acid; and the balance comprising aqueous carrier selected from water and water ethanol; which composition preferably contains from about 0.5% to about 1.5% by weight of potassium, and/or sodium, carbonate and/or bicarbonate buffer (being also electrolyte providing cations) and have a pH of from about 11.5 to about 12.5 (see in particular page 6, lines 19-34 of D4). The compositions preferably have a viscosity that is more than about 2 centipoise, preferably more than about 10 centipoise when at rest, but thin under shear to permit easy dispensing, especially from spray containers (see in particular page 8, lines 17-19 of D4). Preferred compositions have a viscosity at room temperature of preferably less than about 50 centipoise for sprayable compositions (see in particular page 7, lines 26-28 of D4). The compositions are suitable for **removing dirt and other unwanted residues from produce eg fruits and vegetables** (see in particular page 1, lines 5-8 of D4). Compositions comprising water, KOH, oleic acid, sodium bicarbonate and citric acid with a pH greater than 8.5 are also described (see in particular examples 1-3, pages 15-17 of D4).

Document D5 teaches a composition for **cleaning fruits and vegetables** at a basic pH, comprising toxicologically-acceptable basic carbonate buffer at a level to provide from about 1% to about 10% as carbonate ion e.g. the salts of carbonate and/or bicarbonate (being also electrolyte providing cations); from about 0.1% to about 15% by weight of preferably sodium or potassium oleate (ie toxicologically-acceptable detergent surfactant); from about 0.2% to about 4% by weight of polycarboxylic acid salt, especially potassium hydrogen citrate (ie electrolyte providing cations); from about 0.3% to about 5% of orthophosphoric acid; and the balance comprising aqueous carrier selected from water and water-ethanol, wherein said composition has a pH of 9.5 or greater (see in particular page 6, line 34 to page 7, line 14 of D5). Preferred compositions have a viscosity at room temperature of preferably less than about 50 centipoise for sprayable compositions (see in particular claim 9; page 8, lines 14-15 of D5). Compositions comprising KOH, citric acid, sodium bicarbonate, oleic acid and water with a pH greater than 8.5 are described (see in particular examples 1-3, pages 16-20 of D5).

Document D6 teaches a method for **cleaning fruits and vegetables** at a basic pH, comprising contacting the surfaces thereof with an aqueous cleaning solution

comprising from about 0.1% to about 15% wt of preferably sodium or potassium oleate; preferably from about 0.2% to about 4% wt of potassium and/or sodium polycarboxylate eg potassium and/or sodium citrate; the balance comprising an aqueous carrier selected from water and water-ethanol; preferably employing carbonate salt as buffer to provide a pH of about 11 to about 12.5 (see in particular page 4, line 26 to page 5, line 8 of D6). Also describes is a composition for cleaning fruits and vegetables at a basic pH, comprising from about 0.1% to about 15% wt of preferably sodium or potassium oleate (ie toxicologically-acceptable surfactant detergent); from about 0.2% to about 4% wt of polycarboxylic acid salt, especially potassium hydrogen citratem (ie electrolyte providing cations); the balance comprising an aqueous carrier selected from water and water-ethanol, which preferably contains from about 0.5% to about 1.5% wt of potassium and/or sodium carbonate buffer (being also electrolyte providing cations) and has a pH of about 11.5 (see in particular page 6, line 31 to page 7, line 9 of D6). Also described is a composition comprising 3.0 wt% sodium oleate, 1.5 wt% potassium citrate, 1.5 wt% potassium carbonate, 1.0 wt% Plurafac RA-20, balance water with a product pH of 11.5, which is **diluted twofold** and sprayed onto soiled produce (example II, page 15 of D6).

Document D7 teaches that lauric acid, oleic acid and their soaps are surfactant-cleansing agents (see in particular page 927 of D7).

Related to the compositions taught by documents D1-D6, it is considered that the electrolytes present therein provide at least about 0.04 molarity of cations, as the amounts used are higher than the amounts of electrolytes indicated in the examples of the present application. It is stressed that the feature "at least about 0.04 molarity of cations **without considering any surfactant cations**" indicated in present dependent claim 2, is not indicated in the present independent claim 1. Furthermore, the present description indicates that the pH buffer is part of the electrolyte (see in particular page 9, line 1).

3 The subject-matter of present independent claim 8 (aqueous dilute treatment composition), 10 (concentrated composition) and 11 (dilute treatment composition) does not meet the requirements of novelty (Article 33(2) PCT) in the light of any of the prior art documents D1-D6 interpreted in the light of document

D7 (representing common technical knowledge) (see paragraph 2 of this communication).

It is stressed that since the composition parameter "a viscosity less than about 50 centipoise under shear of greater than about 1000 sec^{-1}" indicated in present claim 11 is unclear (see section VIII, paragraph 1.3 of this communication), this parameter cannot distinguish the subject-matter of said claim from the teachings of prior art documents in which this parameter is not described.

4 Concerning the question whether the subject-matter of present independent claims 1, 8, 10 and 11 meets the requirements of inventive step (Article 33(3) PCT), it is stressed that cited documents D1-D6 are related to the same technical problem as is the present application, ie to provide compositions for cleaning food products, eg fruits and vegetables.

VI

1 Certain published documents (Rule 70.10)

Application No Patent No	Publication date *(day/month/year)*	Filing date *(day/month/year)*	Priority date *(valid claim)* *(day/month/year)*
WO-A-9 900 025	07.01.1999	26.06.1998	26.06.1997 18.02.1998

Document D8=WO-A-9 900 025 teaches a composition for **treating food, especially fruits and vegetables**, especially without rinsing before consumption, while maintaining palatability (see in particular page 1, paragraph 1 of D8). A concentrated liquid composition comprising KOH and K_2HPO_4 (ie alkaline buffer source), potassium laurate derived from neutralised lauric acid (ie toxicologically-acceptable detergent surfactant), $Na_2EDTA.2H_2O$ (ie electrolyte providing cations) and water with a pH of 12.1, is described (see in particular example I, page 47 of D8). Concentrated powder compositions to be diluted in tap water resulting in solutions having a pH of 11.5, comprising sodium lauryl sulfate (ie a toxicologically-acceptable detergent surfactant), $TSP.12H_2O$ and sodium

carbonate (ie alkaline buffers as well as electrolytes providing cations) and water (see in particular examples II and III, page 48 of D8).

VII

1 The present application does not meet the requirements of Rule 5.1(a)(ii) PCT, as the relevant background art disclosed in the documents D1-D7 is not mentioned in the description, nor are these documents identified therein.

2. The present application does not meet the requirements of Rule 10.1 PCT, as the units of measure "centipoise" used throughout the claims and the description have not been expressed additionally in terms of the metric system.

3 The present application does not meet the requirements of PCT Guidelines C-II, 4.17, as it contains statements that documents are incorporated by reference.

VIII

1 The present application does not meet the requirements of clarity (Article 6 PCT).

1.1 The features "said composition being able to significantly reduce the level of microorganisms less than one minute, ... so that said food does not need to be rinsed before consumption" in present claim 1 defines the subject-matter in terms of the result to be achieved, which is not allowable (Guidelines C-III, 4.7).

1.2 The feature "low viscosity, typically less than about 50, preferably less than about 10, more preferably less than about 5" on page 7, line 30 to page 8, line 1 lacks clarity, as no unit of viscosity is indicated.

1.3 The feature "impure water" in present claims 11-12 is vague, and has not been replaced by the definition found on page 11, lines 22-23 of the present description.

1.4 The feature "a viscosity less than about 50 (10) (5) centipoise" in present claims 3-6, 9 and 11 is unclear, as it is not indicated **at which temperature** said viscosity is measured.

1.5 The feature "low reserve alkalinity" in present claim 10 is vague, and has not been replaced by a more precise feature found in the application as originally filed (Guidelines C-III, 4.5).

1.6 The term "about" used in present claims 1-11 is vague and unclear and leaves the reader in doubt as to the meaning of the technical feature to which it refers, thereby rendering the scope of said claim unclear (Guidelines C-III, 4.5a).